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# Claims

[c1] 1. An axial kinetic energy projectile comprising:
a nose provided at a forward end of the projectile;
a rear provided at a rearward end of the projectile; and
a base rod provided between said nose and said rear,
said base rod including
a forward member integral with said nose,
a rearward member integral with said rear,
a connection between said forward member and said rearward member which allows said forward member to move axially relative to said rearward member from a contracted position where said rod has a reduced length to an extended position where said rod has an increased length greater than the contracted length, and
a locking mechanism which axially locks said forward member and said rearward member together when said forward member is moved from the contracted position to the extended position.

[c2] 2. A kinetic energy projectile as claimed in claim 1, wherein said connection includes a portion of one of said forward member and said rearward member which is received axially within a portion of the other.

[c3] 3. A kinetic energy projectile as claimed in claim 2: wherein said connection is a sliding fit of said portions of said rearward and forward members.

[c4] 4. A kinetic energy projectile as claimed in claim 3: wherein a chamber is provided between said portions; and
wherein a propellant is located in said chamber which is ignited after firing of the projectile to move said forward member from the contracted to the extended position.

[c5] 5. A kinetic energy projectile as claimed in claim 3: wherein said sliding fit between said portions permits said forward member to move as a result of the set forward force after firing of the projectile from the contracted to the extended position.

[c6] 6. A kinetic energy projectile as claimed in claim 3, wherein said locking mechanism includes:
an enlarged part of one of said portions of said rearward and forward members, and
a reduced part of the other of said portions of said rearward and forward members in which said enlarged part is received when said forward member is moved from the contracted position to the extended position.

[c7] 7. A kinetic energy projectile as claimed in claim 6,

wherein said locking mechanism further includes a stop at a forward end of said reduced part which stops the forward movement said enlarged part.

[c8] 8. A kinetic energy projectile as claimed in claim 7, wherein said locking mechanism further includes:
a twisting means for inducing a twist between said forward member and said rearward member as said forward member is moved to the extended position; and
a second stop spaced rearwardly from said first-mentioned stop behind which said enlarged part is received and then twisted circumferentially as said enlarged part engages said first-mentioned stop.

[c9] 9. A kinetic energy projectile as claimed in claim 2:
wherein said rear includes a spinning mechanism which spins the projectile after firing in one spin direction; and
wherein said connection is respective mating threads on said portions of said rearward and forward members which have a thread direction opposite to that of the spin direction so that after firing the spinning mechanism causes said forward member to be threadably moved from the contracted position to the extended position.

[c10] 10. A kinetic energy projectile as claimed in claim 9:
wherein said locking mechanism is a thread lock.

[c11] 11. A kinetic energy projectile as claimed in claim 1, and further including reinforcing member located in said rod between said forward member and said rearward member when said rearward member is moved from the contracted position to the extended position, said reinforcing member pressing against an outer wall of said rod to help prevent bowing of said outer wall during flight.

[c12] 12. A kinetic energy projectile as claimed in claim 11, wherein said reinforcing member is resilient.